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COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

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PREPARATION OF CHARTS FOR THE USE OF EXTENSION WORKERS.

The wide-awake extension worker is quick to appreciate the value of properly selected illustrative material in presenting his ideas and driving his argument home. He knows as well as anyone that we seldom find a man or woman who, when words fail to explain his or her idea, does not at once try to draw a rough sketch to make the matter plain, whether it is the floor plan of a house or the construction of a fly-trap. "Something like this," says the average man when words fail him, and he turns to an old envelope and the stub of a pencil to make his point clear. So when the extension worker comes along with his ideas, the average man in his turn says, "I'm from Missouri. Show me!"; and the extension worker, if forewarned, has his illustrative material ready to reinforce his arguments whether it be charts, drawings, photographs, lantern slides, models, specimens, or simply rough, made-on-the-spot sketches on a portable blackboard.

How Charts Help.

In reinforcing an extension talk or demonstration, charts can often be very usefully employed. The simplest, and in many cases, the most effective form of chart that can be used is the simple diagram or sketch that the extension worker can draw on a portable cloth blackboard as he talks. It takes no great artistic gift to make a few nasty strokes as one talks and to give to the listener something to look at as well as to listen to. As an example, take a story of the control of the Hessian fly. The speaker, in telling the rather dry history of the life of the fly, suddenly turns to his blackboard. A few lines quickly drawn show the growing wheat; a few more lines suggest the flies; and with a few more quick strokes, the listener sees the whole connected story in a simple but very convincing form. His sketching may be of the very crudest, but the idea is clear in the minds of his audience. They will go home and tell their folks about it; and they will tell the story very much as the worker told it, even to the making of the rough sketches of how the Hessian fly lives, dies, and lives again. The worker has made use of both the ears and the eyes of his audience and driven his lesson home. Incidentally, the expense of a portable cloth blackboard and crayons is about two dollars. The cloth comes in convenient widths and is easily rolled up and carried along on an extension trip.

In the same manner, previously prepared charts can be used to advantage in reinforcing an extension talk. To be effective, such charts, like the blackboard sketch, should serve to make the argument of the extension worker clear and drive home its vital points. The well-made chart, bringing out one clear idea, expressed in simple, pointed language, and if illustrated, illustrated by a drawing or sketch that tells its own story and gives an eye picture along with the word picture of the extension worker, is a real help. The poor chart, loaded down with a clutter of ideas and handicapped with words and an illustration that requires much explanation had best not be used at all.

Points of a Good Chart.

In selecting a chart for use or in having one made up to reenforce his talk, the extension worker bears in mind that the chart is best used in driving home his ideas, one at a time. Every chart he uses, therefore, must meet certain simple but necessary requirements.

1. The good chart expresses and brings out just one definite idea or point in the argument of the extension worker. It includes nothing that will weaken this idea or keep it less in the foreground. Its main business is to rivet a point in the argument before the next point is taken up.

2. Express this one idea in simple, everyday language with "punch" to it, language that anyone can understand. It should never be language that has to be explained or gives the extension worker a need for saying, "in other words it means," or serve as an excuse for showing off his knowledge as an interpreter of scientific language. It ought to simplify what he is saying rather than be a subject for interpretation or explanation.

3. Colors and symbols should be used very sparingly on a chart; like uncommon scientific names, they too often require explanation that defeats the very purpose of the chart which is to make the talk of the extension worker shorter and clearer and not add to his burden of explanation. Used with judgment, however, they often bring out a point more strongly and lighten up the chart.

4. Arrangement of the subject matter has much to do with increasing the teaching value of the chart. A pleasing, well-balanced arrangement gives a good impression at the first glance. Just as in a typewritten letter, the intelligent use of various sizes of type and space can be used to make the "talking" points of the chart stand out clearly.

5. The chart is a failure if it can not be easily read by anyone in the room in which the talk is given. Therefore, in addition to using large, bold type, plenty of space should be left between words and lines to make them stand out clearly. Otherwise, the chart will have to be read and explained at length by the extension worker for the benefit of those who can not see it distinctly and so defeats its purpose.

Above all things the chart must not be crowded either with ideas or lettering. Both must be adjusted to the average mind and eye. The beginner with charts is inclined to put four or five times as much matter on the chart as there is room for. He tries to crowd on to one chart ideas and material that ought to take up six or seven charts of the right kind and thus weakens his talk and argument by continual explanation. Such a chart gives the extension worker the appearance of reading from a book or from notes when its "speaking" points really ought to stand out boldly and clearly, helping the eyes of his listeners to cooperate with their ears in getting his ideas into their heads.

Preparing Chart Copy.

The extension worker, whether he makes his own charts or has them made for him, should have an understanding of the limitations of chart-making as well as its possibilities. For this reason, a few suggestions are offered regarding the preparation of chart copy.

1. Clear, complete, and explicit copy should be prepared; tabulated and explanatory matter should be plainly typewritten.
2. Plans for illustrated charts should be accompanied whenever possible by drawings or photographs clearly showing what is desired or, better still, by good lantern slides of the drawings desired.
3. In preparing copy, careful estimates should be made of the amount of matter that can be put on a chart of the size desired without overcrowding or excessive use of abbreviations.

The largest cloth chart now being made is 65 by 72 inches, and five sizes of black-faced type ranging from 1 to 3 inches in height are commonly used.

The following table shows approximately the average number of letters per foot, spaces available per line, and number of lines on a standard chart 65 by 72 inches in size for each of the five sizes of type.

Table Indicating the Amount of Matter Which Can Be Put on a Standard (65 by 72 inches) Chart With Different-Sized Letters.

Type.	Size (height) of letters in inches.	Average number of letters per foot.	Average number of spaces per line.	Average number of lines on chart.
No. 1	1	14	60	35
No. 2	1½	9	45	20
No. 3	2	7	30	15
No. 4	2½	6	25	12
No. 5	3	5	20	10

Since the spacing varies more or less, the above figures are only approximate, but they will serve as a guide in estimating how much matter a chart can accommodate. In using the table, it should be observed that:

1. One letter must be deducted from the total number of letters per line for each space between words.
2. When there are a number of "I's" in a line not balanced by an equal number of "M's" or "W's" a few more spaces may be allowed to a line.
3. The two largest alphabets are used mainly for headings except in cases where charts are brief.
4. Type No. 1 is intended only for explanatory notes and detailed information.
5. There should be an equal amount of "light" between the lines.
6. Ample space should be left at the top of the chart for headings.

Arrangement of Charts for Use.

When a series of charts has been prepared their proper arrangement is necessary to their most effective use. Therefore, in arranging a series of charts it is well to bear in mind the following points:

1. Have them arranged in a logical manner and in keeping with the way the extension worker himself opens and develops his subject.
2. Have the first chart present a general idea of what is to follow, much as an introduction to a book gives one an idea of its purpose and what it covers. It should give the listener the viewpoint of the extension worker and prepare him for the succeeding steps in his argument.
3. The charts that are to follow should indicate clearly the steps or points that follow and clinch each point as the extension worker presents it.
4. The last chart should be a brief, comprehensive summary of what has gone before, giving in a nutshell the meat of the whole talk and urging its application. It should leave the audience knowing what ought to be done and anxious to do it.
5. Do not have too many charts in a series, better have a few charts bringing out the strong points clearly than a large number leaving no very clear impression.
6. When the set or series is a permanent one, a distinctive and artistic cover chart is very desirable. If an illustration is used, it should invite the interest and like the cover of a "best seller" sell its contents.

Handling a Chart.

It can not be too strongly emphasized that the extension worker using a chart or series of charts be familiar not only with the subject matter but with handling the charts in connection with his talk as well.

1. Place or hang the chart where the user can readily turn to it and where everyone in the audience can see the chart in use plainly. This is the first and most important step. Don't hang several of them upon the wall at one time as is often done. Show them one at a time.

2. Have the chart so placed that you can turn from one to the next readily and easily. Nothing is more awkward and likely to lessen the interest of your audience than keeping it waiting while you substitute one chart for another.

3. In using the chart, don't step in front of it. If possible, have a pointer and use it both in calling attention to what is on the chart and in turning from one chart to the next.

Chart-Making Materials.

Wherever a more elaborate chart-making equipment is not available the individual extension worker, in many cases, will find a simple outfit of much help in preparing charts of local interest. Suggestions regarding such equipment and the use of chart materials are included in a mimeographed circular on Chart-Making Equipment and Materials, which may be obtained from the Visual Instruction and Editorial Section, Office of Cooperative Extension Work, through any State Director of Extension.

This section welcomes suggestions and inquiries regarding chart work for extension purposes, and desires in every way to encourage the intelligent and universal use of good charts in extension work.

1. It is the duty of the State to protect the rights of its citizens and to maintain the public order and the peace of the State. This duty is incumbent upon the State inasmuch as it is the only power which is capable of performing these functions.

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3. In order to perform these duties, the State is bound to maintain a certain degree of order and peace. This is the only way in which the State can protect the rights of its citizens and maintain the public order and the peace of the State.

THE DUTY OF THE STATE

However, a more elaborate and detailed statement is not possible for the purpose of this paper. It is only intended to give a general idea of the duties of the State. The duties of the State are of two kinds: the duties of the State towards its citizens and the duties of the State towards other States. The duties of the State towards its citizens are of two kinds: the duties of the State to protect the rights of its citizens and the duties of the State to maintain the public order and the peace of the State. The duties of the State towards other States are of two kinds: the duties of the State to maintain the peace of the world and the duties of the State to protect the rights of its citizens.

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